REMARKS

Claims 1 – 12, 14 – 20, 22 – 28, and 39 – 43 are pending in this application.

Applicant thanks the Examiner for the interview on 26 September 2007. This and the following paragraph comprise a complete record of the interview. In the interview, Applicant's attorney discussed the invention and compared the prior art to the invention. In particular, the undersigned attorney stated that he thought the Applicant would agree to limiting the claims to 40% foam plastic and above, but that he would have to discuss this with the Applicant. The Examiner thought that this amendment would make the claims patentable. However, on consulting with the Applicant, the Applicant informed the undersigned attorney that, on that same day, he had just been informed by his panel manufacturer that a Taiwan manufacturer has been importing panels that can be used in concrete formworks with a density of 30% foam and under pricing Applicant's panels. Thus, a patent limited to 40% foam plastic and above would not be of value to the Applicant at this time. The undersigned attorney apologizes for this change of position, but he was not aware of the importation prior to the meeting.

It was also mentioned by the Examiner during the interview that this is the only concrete formworks application that the Examiner has examined. This is because there are so few patent applications in the concrete formworks art. The Examiner remarked that none of the SPEs involved in reviewing this case had ever had a concrete formworks application either. Applicant submits that this is because the concrete industry is very conservative and sticks with what they know to work. The Examiner also remarked that, during the review of the appeal, concrete was being poured at a building just outside the window, and someone remarked that perhaps they should go talk to the people pouring the concrete. It is submitted that this would be a good idea. Further, the declarations submitted in this case were submitted for that very reason: so the United States Patent Office would have the benefit of someone skilled in this art. Thus, it is submitted that the SPE involved in this case should take the time to review the declarations very closely.

Applicant thanks the Examiner for reopening prosecution on the instant application in response to the Appeal Brief filed February 9, 2007. It is noted that all rejections of record (and the objection to the specification) in the previous Office Action mailed April 4, 2006 have been withdrawn.

Claim 43 has been objected to as being dependent upon a rejected base claim. This objection is respectfully traversed on the grounds that the base claim is patentable for the reasons given below.

Claims 1 – 3, 5 – 9, and 25 have been rejected under 35 USC 103(a) as being unpatentable over Hedrick et al. (US Patent No. 4,424,254, hereinafter "Hedrick"). This rejection is respectfully traversed with regard to the amended claims. The claims have been amended to put the concrete formwork limitations in the body of the claim. Thus, it is now absolutely clear that the claims do not cover just any panel. The Office Action states that Hedrick teaches a laminate suitable for concrete construction panels at col. 1, lines 39 – 50; col. 3, lines 47 – 57; and col. 4, line 20. Respectfully, Hedrick does not teach this. Hedrick mentions that the panels can be used for building construction panels attached to metal or concrete frames. This is not the same as a concrete formwork, which is claimed. There is not an iota of disclosure or suggestion in Hedrick that the claimed structure can be used in a concrete formwork. Thus, claims 1 – 3, 5 – 9, and 25 are patentable.

Claims 4, 10 – 12, 22, and 26 – 28 have been rejected under 35 USC 103(a) as being unpatentable over Hedrick, in view of Sobolev (US Patent No. 5,030,488, hereinafter "Sobolev"). This rejection is respectfully traversed with regard to the amended claims. Sobolev adds to Hedrick a weak suggestion that metal/plastic panels can be used for concrete formworks. However, it also adds considerable data as to the performance of metal/plastic sandwich panels. Aluminum is indicated to be the preferred metal (col. 19, the line just above Table II). Of the 81 examples given in the application, aluminum was used in 80 and steel in one. The one steel example was inferior to the comparable examples for aluminum. The steel panel tested is about 5% heavier than the comparable aluminum panel, but deflects about 20% more and is 30% worse with respect to impact resistance. See cols. 19 and 20, Table II; and col. 13, lines 42 – 56.) The law requires that a patent examiner take note of the whole reference, not just the part that supports his position. A patent examiner must consider the

whole of the teachings of the reference and not ignore the portion of a reference that teaches against the combination according to the invention. MPEP 2142.02 and MPEP 2145 X.D. Further, Sobolev's disclosure that the panel can be used for concrete pouring forms is *di minimus*; in 38 columns of specification, the only mention of the concrete pouring form application is in col. 3, line 60, and is at the end of a litany of possible uses. Those skilled in the art seeking to make a concrete form are not going to actually read the patent. They will notice that the entirety of the rest of Sobolev, except for these few words, is about panels for freight trailers. They will note that all the tests in Sobolev are tests pertinent to freight panels, not concrete pouring forms. One skilled in the art of concrete formwork panels would understand that the test for a concrete pouring form is that it deflects minimally under the pressure of pouring concrete. (Rahe Dec., ¶10) Deflection is critical because it determines how fast one can pour the concrete. That is, when concrete is poured into a form, the amount of deflection is proportional to how fast the concrete enters the form. Thus, a 10% lower deflection allows one to pour the concrete about 10% faster, a 25% lower deflection allows the concrete to be poured about 25% faster, and a 30% lower deflection allows the concrete to be poured about 30% faster, etc. Time is money in the concrete industry, and the savings in time as a result of lower deflection in a panel that meets the weight constraints flows money directly to the bottom line. Thus, significantly less deflection means significantly more profits. (2nd Dec. of Johnson, ¶¶ 16 – 19) Even a 10% better deflection is significant in the concrete industry. (Supp. Dec. of Rahe, ¶10) These are real concerns of someone in the concrete pouring industry, not vaporware. Considering the positions of the SPEs in this case, the undersigned seriously doubts that they have carefully read the declarations in this case and paid attention to the technical details of the references. The only steel laminate panel tested in Sobolev deflected 20% more than the comparable aluminum laminate panel, even though the steel panel was 5% heavier. (Table II spanning columns 19 and 20 in Sobolev and 2nd Dec. of Forest, ¶15) The steel laminate also was 30% worse than the aluminum panel with regard to impact resistance. (Sobolev, *ibid*, and 2nd Dec. of Forest, ¶16) Thus, Sobolev teaches against the combination of the high-density polyethylene with steel. Thus, Sobolev actually makes it less likely that someone skilled in the concrete formworks art would consider using steel/plastic panels.

Moreover, Applicant provided objective evidence that the instant application is superior to all other concrete formwork panels. A key portion of the evidence submitted was quantitative, giving

specific comparative measurements vis-à-vis the most common formwork panel in use today, the high-density overlay (HDO) panel, in the most important characteristic for concrete formwork panels, i.e., deflection under pressure. (Rahe Dec., ¶10, and Exhibit B attached thereto) A *⅜-inch* panel as claimed performed 20% better than a new *½-inch* HDO panel and 43% better than a used *½-inch* HDO panel. Applicant also provided qualitative evidence in the form of statements of the Vice-President of Engineering for Symons Corporation, the leading manufacturer of concrete formworks and shoring in the United States. (Rahe Dec., ¶1) Mr. Rahe stated in a declaration that the panel as claimed in claim 1 was the best concrete formwork he had ever found, that he found that this was surprising considering the thinness and light weight of the panel, that the panel was over 85% plastic, and the plastic was more than 30% gas. (Rahe Dec., ¶¶8, 9, and 11) Mr. Rahe also gave qualitative reasons for the superiority of the claimed panel, in that it was more durable than wood or aluminum panels and provides a good finish to the concrete. (Rahe Dec., ¶¶12 – 14) This is strong evidence of patentability that must be considered by the USPTO. MPEP §2144.08, *In re Soni*, 54 F.3d 746,750, 34USPQ2d 1684, 1687 (Fed. Cir. 1995); *In re Piasecki,* 745 F.2d 1468, 1474, 223 USPQ 785, 789-90 (Fed. Cir. 1984).

Claims 14 – 17 have been rejected under 35 USC 103(a) as being unpatentable over Hedrick, in view of Fitzgerald et al. (US Patent No. 4,842,241, hereinafter "Fitzgerald"). This rejection is respectfully traversed. These claims depend on claim 1 and are patentable for the same reason, since Fitzgerald adds nothing to the prior references with respect to claim 1. Claim 14 recites a flange made by bending the end of the panel. The Examiner admits that Sobolev does not show a flange, but cites Fitzgerald to obviate the flange. However, the portions of Fitzgerald that the Examiner points to and interprets as flanges are the sidewalls 12 and 14 (FIG. 1). Fitzgerald does have flanges 70 and 72 (FIG. 1), but these are formed by attaching a separate metal strip to the sidewall. Those skilled in the art would not interpret a sidewall as a flange. The Board may take judicial notice of the fact that the dictionary, e.g., *The American Heritage Dictionary, New College Edition*, 1980 Houghton Mifflin Company, Boston, page 499 (courtesy copy previously provided in this case) defines *flange* as "A protruding rim, edge, rib or collar … used to strengthen an object, hold it in place, or attach it to another object". This definition is completely consistent with Applicant's use of the term, but inconsistent with the Examiner's. More importantly, one skilled in the art would not look at Fitzgerald and think of Applicant's claimed flange, because Fitzgerald teaches a different form for a flange; and Applicant's

claimed flange would not work in Fitzgerald because the walls are too thick. Clearly, the Examiner is using the hindsight of Applicant's disclosure to modify Sobolev, not Fitzgerald. This hindsight is not proper. MPEP §2142; *In re Vaeck*, 20 USPQ2d 1438, 1432 (Fed. Cir. 1991); *W.L. Gore & Associates, Inc. v. Garlock*, 220 U.S.P.Q. 303, 311-13 (Fed. Cir. 1983).

Claim 18 has been rejected under 35 USC 103(a) as being unpatentable over Hedrick, in view of Fitzgerald, and further in view of Toedter (US Patent No. 3,654,053, hereinafter "Toedter"). This rejection is respectfully traversed. Claim 18 depends on claim 1 and includes all its limitations; therefore, this claim is patentable for all the reasons given in Section VII.C.1.ii) above in connection with claim 1. *In re Fine*, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) at headnote 4.

Claim 18 recites a double-thick flange made by bending the end of the panel twice. The Examiner cites Toedter to obviate the flange. Toedter does show a decorative panel that includes a folding process similar to the folding process by which the flange of the present invention is made. However, the process is not used to make a flange, but to construct the body of the panel itself. (FIGS. 4 – 12 and col. 7, lines 47 – 52) There is nothing in Toedter that would suggest making a flange. The only suggestion to use the process of Toedter for a flange comes from the present disclosure. The Examiner again is permitting the present disclosure to guide him in finding flange prior art, in the overall structure of an entire panel, which panel does not include a flange. This is hindsight. See *Gore, supra*.

Claims 19 and 20 have been rejected under 35 USC 103(a) as being unpatentable over Hedrick, in view of Lee (US Patent No. 6,295,786, hereinafter "Lee"). This rejection is respectfully traversed. These claims depend on claim 1 and contain all its limitations. Therefore, they are patentable for the same reasons as claim 1. *In re Fine*, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) at headnote 4.

Claims 23 and 24 have been rejected under 35 USC 103(a) as being unpatentable over Hedrick, in view of Gallis et al. (US Patent No. 4,473,209, hereinafter "Gallis"). This rejection is respectfully traversed. These claims depend on claim 1 and contain all its limitations. Therefore, they

are patentable for the same reasons as claim 1. *In re Fine*, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) at headnote 4.

Claims 39 – 41 have been rejected 35 USC 103(a) as being unpatentable over Sobolev. This rejection is respectfully traversed. Claim 39 reads as follows:

> A concrete formwork panel comprising:
> a foam plastic core;
> a metal facing layer attached to said plastic core;
> a metal backing layer attached to said plastic core;
> wherein said foam plastic is 30% to 70% gas, by volume.

Again, it appears that the SPEs have not actually read and paid attention to the details of Sobolev. The limitation of a foam plastic core in which the foam plastic is 30% to 70% gas by volume is not disclosed in Sobolev. The highest gas content of any foam plastic disclosed in Sobolev is about 27%. The USPTO appears to take the position that, because the rejection is a §103 rejection rather than a §102 rejection, the cited art does not need to include all the limitations of the claim. While it is true that, for a §102 rejection, all the elements must be found either expressly or inherently in a claim, this does not mean that, for a §103 rejection, limitations can be inserted based on the Examiner's opinion. Each limitation still must be found in a reference; it is just that the limitation can be from a second prior art reference. The prior art reference must teach or suggest all of the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991); MPEP 2142, and MPEP 2143 – 2143.03. "It is error to ignore specific limitations distinguishing over the references." *In re Glass*, 176 USPQ 489, 491 (CAPA 1973). See also *In re Saether*, 181 USPQ 36, 39 (CCPA 1974) at headnote 1, and *Ex parte Petersen*, 228 USPQ 217, 218 (PO Bd Pat App & Inter 1985) at headnote 1. Thus, claims 39 – 41 are patentable.

Claim 42 has been rejected under 35 USC 103(a) as being unpatentable over Sobolev in view of Hedrick. This rejection is respectfully traversed. Claim 42 depends on claim 39 and contains all its limitations; therefore, it is patentable for the reasons given in Section VII.C.3.i) above. *In re Fine*, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) at headnote 4.

In addition, claim 42 includes the limitation that the plastic is high-density polyethylene. While Hedrick mentions high density polyethylene in a plastic/metal sandwich panel, it says nothing about whether such a change might make the panel more useful for concrete. It is clear that the SPEs are lumping together in their minds all technology related to panels. To them, a panel is a panel; and any panel can be used for anything a panel ever was mentioned once as being useful for. The actual technical requirements to make a concrete formwork are ignored, because all panels are the same. Obviously, if they have no experience in concrete formworks and are not seriously reading the declarations, this is the result. We respectfully, and seriously, suggest that if it is correct that none of the SPEs have experience in the field of concrete formworks, it would be appropriate to go talk to one of the workers pouring concrete outside their window. They will find that what is in the declarations is correct, and that in the concrete pouring industry, time is money, and they are not going to even try a panel that has 20% more deflection because they will not be able to pour the concrete as fast.

In view of the above amendments and remarks, Applicant believes the pending application is in condition for allowance. A one-month Petition For Extension of Time and the required fee is enclosed. Applicant believes no additional fee is due with this response. However, if an additional fee is due, please charge our Deposit Account No. 50-1848, under Order No. 013190.0101PTUS from which the undersigned is authorized to draw.

Respectfully submitted,
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